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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,615	11/27/2000	Jack Cheng	GRQ-00100	8414

28960 7590 03/06/2002  
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EXAMINER
NGUYEN, XUAN LAN T

ART UNIT	PAPER NUMBER
3613	

DATE MAILED: 03/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/723,615

Applicant(s)

CHENG ET AL.

Examiner

Lan Nguyen

Art Unit

3613

-- The MAILING DATE of this communication appears, on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-140 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-140 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 54-131, drawn to a sonic bearing, classified in class 384, subclass 01.
  - II. Claims 1-53 and 132-140, drawn to a method of controlling, classified in class 384, subclass 01.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the method claims are broad enough to read on the use of other piezoelectric bearings, not just the instant sonic bearing.

2. Upon choosing one of the inventions above, Applicant is further required to elect a sub-sub-species under one invention for the examination on the merits. The species, sub-species and sub-sub-species of each invention are listed below.

**Under invention I, the sonic bearing:**

Species IA    direct bearing                      figure 3A

- Sub-species IA1                      figure 4A

Sub-sub-species 1A1a	figure 4C
Sub-sub-species 1A1b	figure 4D
Sub-sub-species 1A1c	figure 6A
Sub-sub-species 1A1d	figure 6B
Sub-sub-species 1A1e	figure 16
Sub-sub-species 1A1f	figures 17-19
Sub-sub-species 1A1g	figure 27

- Sub-species 1A2            figure 4B

Sub-sub-species 1A2(a-g)            no corresponding illustration;

these sub-sub-species would have the structures of the above illustrated sub-sub-species of sub-species 1A1 except, the piezoelectric element would be a magnetostrictive element.

Species 1B    in-direct bearing    figure 3B

- Sub-species 1B1            figure 5A

Sub-sub-species 1B1a            figure 5C

Sub-sub-species 1B1b            figure 5D

Sub-sub-species 1B1c            figure 5E

- Sub-species 1B2            figure 5B

Sub-sub-species 1B2(a-c)            no corresponding illustration; these sub-

sub-species would have the structures of the above illustrated sub-sub-species of sub-species 1B1 except, the piezoelectric element would be a magnetostrictive element.

**Under invention II, method of controlling:**

Species IIA	figure 7A
Species IIB	figure 7b
Species IIC	figures 8A-8C
Species IID	figures 8D-8F
Species IIE	figure 9A
Species IIF	figure 9B
Species IIG	figure 10
Species IIH	figure 15A
Species III	figure 15B
Species IIJ	figure 15C

Please note that the followings are the sub-species for each of the above species under invention II, these sub-species do not have corresponding illustrations. However, they are distinctively disclosed and distinctively claimed.

Sub-species II(A-J)1, method of minimizing bonding by using liquid as lubrication.

Sub-species II(A-J)2, method of minimizing bonding by using a coating of a thin film.

Sub-species II(A-J)3, method of minimizing bonding by using a selective melting temperature.

Sub-species II(A-J)4, method of minimizing bonding by using a selective resonant frequency.

Sub-species II(A-J)5, method of minimizing bonding by using a selective root-mean-square velocity.

3. Currently, claims 1 and 2 are generic. It is noted that claims 54 and 125 are directed to an untrastiff sonic bearing. However, the disclosure discussed and illustrated both the stiff and ultrastiff bearings. Hence, claims 54 and 125 have been deemed non-generic.

4. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim, as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

XLN

XLN  
March 4, 2002

  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

3/4/02